



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

2814 \$

Inventor: E. Geusic et al.

Title: INTEGRATED CIRCUITS USING OPTICAL WAVEGUIDE INTERCONNECTS FORMED THROUGH A SEMICONDUCTOR WAFER AND METHODS FOR FORMING SAME

JAN 14 2002

RECEIVED MAIL ROOM

Docket No.: 303.382US2  
Filed: July 18, 2000  
Examiner: Wai-Sing Louie

Serial No.: 09/618,648  
Due Date: November 27, 2001  
Group Art Unit: 2814

Commissioner for Patents  
Washington, D.C. 20231

We are transmitting herewith the following attached items (as indicated with an "X"):

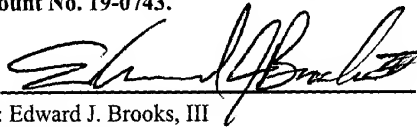
- ☒ A return postcard.
- ☒ An Amendment and Response (10 Pages).
- ☒ A check in the amount of \$1386.00 to cover the fee for additional claims as calculated below.

If an additional fee is required due to changes to the claims, the fee has been calculated as follows:

CLAIMS AS AMENDED						
	(1) Claims Remaining After Amendment		(2) Highest Number Previously Paid For	(3) Present Extra	Rate	Fee
TOTAL CLAIMS	55	-	20	35	x 18 =	\$630.00
INDEPENDENT CLAIMS	12	-	3	9	x 84 =	\$756.00
[ ] MULTIPLE DEPENDENT CLAIMS PRESENTED						\$0.00
TOTAL						\$1386.00

Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional required fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
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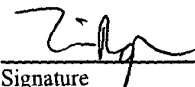
By:   
Atty: Edward J. Brooks, III  
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CERTIFICATE-UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on this 27 day of November, 2001.

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(GENERAL)



S/09/618,648

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Joseph E. Geusic et al. Examiner: Wai-Sing Louie  
Serial No.: 09/618,648 Group Art Unit: 2814  
Filed: July 18, 2000 Docket: 303.382US2  
Title: INTEGRATED CIRCUITS USING OPTICAL WAVEGUIDE  
INTERCONNECTS FORMED THROUGH A SEMICONDUCTOR WAFER  
AND METHODS FOR FORMING SAME

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AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Commissioner for Patents  
Washington, D.C. 20231

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Applicant has reviewed the Office Action mailed on August 27, 2001. Please amend the above-identified patent application as follows.

IN THE CLAIMS

Please cancel claims 1 and 30 after adding the following new claims 45-99:

- B1
45. (New) An electronic system, comprising:  
at least one semiconductor wafer;  
a number of integrated circuits with at least one integrated circuit formed on the at least one semiconductor wafer; and  
at least one optical waveguide formed in a high aspect ratio hole that extends through the thickness of the at least one semiconductor wafer.
46. (New) The electronic system of claim 45, further comprising:  
at least one optical transmitter associated with the optical waveguide to transmit optical signals between selected integrated circuits of the electronic system; and  
at least one optical receiver associated with the at least one optical waveguide to receive optical signals transmitted between the selected integrated circuits of the electronic system.
47. (New) The electronic system of claim 45, wherein the number of integrated circuits includes a microprocessor and a memory device.

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